Notice of Allowability	Application No.	Applicant(s)	
	10/505,458	FUJINO ET AL.	
	Examiner	Art Unit	
	Ling-Siu Choi	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the Amendment filed 12/29/2006*.

2. ☒ The allowed claim(s) is/are *1-10*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This Office Action is in response to the Amendment filed December 29, 2006. Claims 9-10 have been added and claims 1-10 are now pending.

Allowable Subject Matter

2. Claims 1-10 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Urata et al. (US 6,586,525 B1), Ueda et al. (EP 1 065 245 A1), and Kimura et al. (US 5,539,043).

Summary of claim 1:

An aqueous dispersion containing		
A	a carboxyl group-containing chlorinated propylenic isotactic random **copolymer** produced with a metallocene catalyst having	
		chlorine content of 5-40% by weight
		grafting level of α,β-unsaturated carboxylic acid or its anhydride of 0.1-20 wt%
		weight average molecular weight of 10,000-3,000,000
		a melting point of from 115 to 135°C
B	a stabilizer	

Urata et al. disclose a binder resin comprising carboxyl group-containing

chlorinated polyolefin and a stabilizer, wherein the polyolefin can be a propylene-α-olefin copolymer having weight average molecular weight of 10,000 to 150,000; the carboxyl group-containing chlorinated polyolefin has a chlorine content from 10 to 30 wt%; the unsaturated carboxylic acid monomer used to introduce carboxyl group to the polyolefin is maleic acid, maleic anhydride, fumaric acid in an amount of 1 to 10 wt% to polyolefin; and the stabilizer is an epoxy compound (abstract; col. 2, lines 53-67; col. 3, lines 1-4, 20-31, and 39-49; col. 5, line 67; col. 6 line 1). It is noted that Urata et al. use an organic solvent for the binder resin composition and are silent on the use of water as a solvent (col. 5, lines 1-25). Thus, Urata et al. do not teach or fairly suggest an aqueous dispersion comprising (A) a carboxyl group-containing chlorinated propylenic random isotactic copolymer, produced with a metallocene catalyst, having a chlorine content of 5-40 wt%; grafting level of α,β-unsaturated carboxylic acid or its anhydride of 0.1-20 wt%; weight average molecular weight of 10,000-3,000,000; and a melting point of from 115 to 135°C and (B) a stabilizer.

Ueda et al. disclose a binder resin composition comprising carboxyl group-containing chlorinated polyolefin resin and an stabilizer, wherein the carboxyl group-containing chlorinated polyolefin has chlorine content of 0.1 to 40 wt%, grafting level of α, β-unsaturated carboxylic acid and/or its acid anhydride of 0.5 to 10 wt%, and weight average molecular weight of 30,000 to 220,000 and the stabilizer is an epoxy compound (abstract; [0030]-[0031]; [0041]-[0046]). Ueda et al. further disclose that the polyolefin is produced using metallocene compound and is syndiotactic ([0011]). It is noted that Ueda et al. use an organic solvent for the binder resin composition and are silent on the

use of water as a solvent ([0029]). Thus, Ueda et al. do not teach or fairly suggest an aqueous dispersion comprising (A) a carboxyl group-containing chlorinated propylenic random isotactic copolymer, produced with a metallocene catalyst, having a chlorine content of 5-40 wt%; grafting level of α,β-unsaturated carboxylic acid or its anhydride of 0.1-20 wt%; weight average molecular weight of 10,000-3,000,000; and a melting point of from 115 to 135°C and (B) a stabilizer.

Kimura et al. disclose an aqueous dispersion comprising (A) 70-98 wt% of carboxyl group-containing **chlorinated** polypropylene and (B) 2-30 wt% of carboxyl group-containing propylene-α-olefin, wherein the carboxyl group-containing chlorinated polypropylene has a number average molecular weight of 5,000 to 40,000 and a chlorine content of 15 to 35 wt%; and carboxyl group-containing propylene-α-olefin has a number average molecular weight of 2,000 to 20,000 (abstract; col. 2, lines 61-63; col. 3, lines 6-14 and 23-30; claim 1). Attention is drawn to Production Example 1, wherein the carboxyl group-containing chlorinated polypropylene has a melting point of 90°C. And, attention is directed to the Production Example 2, wherein carboxyl group-containing propylene-butene-ethylene terpolymer has a melting point of 95°C. However, Kimura et al. do not teach or fairly suggest an aqueous dispersion comprising (A) a carboxyl group-containing **chlorinated propylenic** random isotactic **copolymer**, produced with a metallocene catalyst, having a chlorine content of 5-40 wt%; grafting level of α,β-unsaturated carboxylic acid or its anhydride of 0.1-20 wt%; weight average molecular weight of 10,000-3,000,000; and a melting point of from 115 to 135°C and (B) a stabilizer.

Furthermore, the data provided in the present Specification demonstrates that it is not obvious to use isotactic random copolymer in the aqueous dispersion.

	degree of chlorination	heat sealstrength (g/15 mm)	primer test		
			adherence	gasohol resistance	warm water resistance
Ex.1	20.5%	460	100/100	no abnormality	no abnormality 100/100
Ex. 2	15.6%	550	100/100	no abnormality	no abnormality 100/100
Ex. 3	20.7%	980	100/100	no abnormality	no abnormality 100/100
Ex. 4	15.5%	1350	100/100	no abnormality	no abnormality 100/100
comp. 1	20.4%	190	70/100	peeling off after 10 min	no abnormality 30/100
comp. 2	15.5%	180	75/100	peeling off after 10 min	no abnormality 50/100
comp. 3	20.5%	220	100/100	peeling off after 5 min	some blisters 25/100
comp. 4	15.8%	240	100/100	peeling off after 10 min	some blisters 30/100

examples 1-4 - isotactic random copolymer
comparative Examples - syndiotactic polypropylene
comparative examples 3-4 - propylene-ethylene copolymer (Ziegler-Natta catalyst)

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

LING-SUI CHOI
PRIMARY EXAMINER

March 15, 2007